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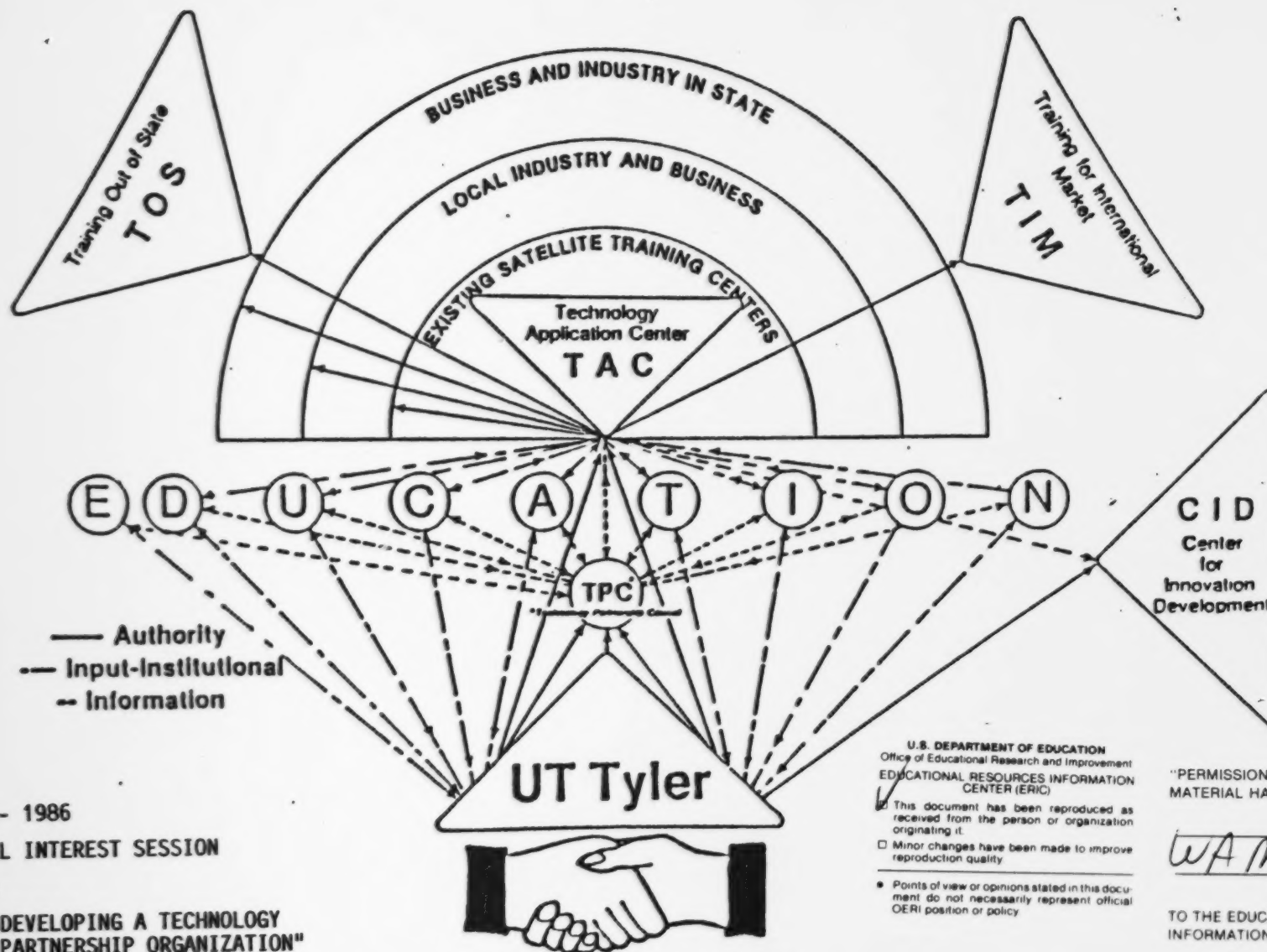
AUTHOR Mayfield, W. A.
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ABSTRACT

The University of Texas at Tyler (UTT) has assumed the responsibility of developing and initiating a partnership organization between industry and education within the East Texas community. A communication network involving local, state, and national government, chambers of commerce, industry, business, and education will be the core of the partnership. The intent of this partnership effort is to identify the potential benefits, investigate opportunities that can evolve from such a relationship, explore the level of interest within the East Texas community in developing a partnership organization, and determine the population to be served by the partnership organization concept. Meetings with the groups that will be involved will focus on gathering information related to a "Proposed Technology Partnership Organization" graphic model. UTT will appoint a technology partnership council and a communication network. When a technology application center is developed, UTT will coordinate responsibilities with that center. A feasibility study currently being conducted will determine training/educational needs, participants, existing training/educational opportunities, and existing training centers that would participate. (The survey and survey data and a working draft of the Technology Partnership Organization are appended.) (YLB)

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SPECIAL INTEREST SESSION

TOPIC:

"DEVELOPING A TECHNOLOGY
PARTNERSHIP ORGANIZATION"

BY:

W. A. MAYFIELD, PROF.
DEPARTMENT OF TECHNOLOGY
UNIVERSITY OF TEXAS AT TYLER

Technology Partnership Organization

The University of Texas at Tyler • Department of Technology

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DEVELOPING AND MANAGING TECHNOLOGY PARTNERSHIPS
BETWEEN
INDUSTRY AND HIGHER EDUCATION

INTRODUCTION

"EVENTS OF THE LAST DECADE HAVE SHAKEN THE CONFIDENCE OF THE EDUCATIONAL AND INDUSTRIAL COMMUNITIES, BOTH OF WHICH ARE RECOGNIZING THAT ISOLATION FROM THE OTHER HAS CONTRIBUTED TO THEIR PRESENT PREDICAMENT." (1)

The University of Texas at Tyler has appointed Dr. W. A. Mayfield, professor in The Department of Technology the responsibility of developing and initiating a partnership organization between industry and education within the East Texas community. A communication network involving local, state and national government, chambers of commerce, industry, business, and education will provide the core of the partnership.

Two basic functions of education within the partnership concept are to prepare people to be productive in terms of technology skills and to provide knowledge that will foster thinking, learning, and creating (TLC).

TLC is the bottom line demand of the work force within an information society. The goal of the partnership is to generate a work force capable of developing innovative products and strategies that will allow industry to be competitive as well as to commercialize the global market place.

PARTNERSHIP RATIONALE

"THE FUTURE OF PARTNERSHIPS GREATLY DEPEND ON OUR FOSTERING THE STRATEGIC PERSPECTIVES THAT ALLOW EACH PARTY TO ACCESS AND APPRECIATE THE SUBSTANTIAL REWARDS THAT ALLIANCES CAN PROVIDE." (2)

The urge and need by mankind to form partnerships extends as far back as we can trace the history of the human race. This tells us that the partnership concept is not new and it continues to contribute to man's interdependence needs. Partnerships have evolved where both partners felt that long-range benefits were insured from such an alliance. Partnerships generate new organizational structures that challenge the existence of old ones, thus requiring regular and close communication to develop a permanent link.

Within a relatively short period of time, the tremendous changes in technology resulting from the movement from an industrial society to an information society has generated consequences that make the partnership concept a logical approach in developing human resources, economic perspectives, innovative processes, research, community relationship and physical potentials.

"As we complete our transition to an information society, it is more important than ever that we understand why higher education and industry must depart from their past isolation, recognize new forms of interdependence, and search jointly innovative solutions in the future. To do so, we must look beyond the horizon of the ordinary and the habitual."
(3)

Pooling industry's and education's resources must become a partnership priority if America is to regain that competitive edge in the world market place and in skilled labor. Employers are demanding people who are extraordinarily creative, people who can think, people who can learn, and people who accept challenges of change.

Information and knowledge are the foundations of this age because they are the basic elements in decision making. The computer alone is not an adequate communication system. Automation systems are not a cure all. Leadership must be capable of developing management systems with clear goals that reflect operating plans, company strategies and performance expectations that are attainable.

A shortage of skilled labor will exist during the next 15 years. The best talent will migrate to industry and education that provides the best leadership and best work environment. The employee adapted to the information age is looking for a place where they can make contributions to the team effort. College graduates between now and 1992 will be expecting to be employed in a job that requires a college graduate. Further, two-to-four years of college is no longer sufficient for a life-long career. The current rate of change requires retraining every three-to-five years.

The information age has shifted the emphasis from the dollar capital to the human capital as the strategic resource. This new human resource movement will bring into the work place new concepts such as:

- . Greater competition for the best employee
- . A new sellers market
- . Drastic cuts in middle management
- . More emphasis on innovative plans
- . Larger numbers of female employees
- . More educational requirements that support TLC (Thinking, learning, creativity)
- . Bottom-up leadership concepts
- . More emphasis on entrepreneurship
- . Partnerships between corporate and education
- . More concern about partnership alignment
- . Greater concern for vision (futuristic)
- . Better work place environments
- . Performance incentives
- . Contracted labor
- . Increased concern for the quality of life
- . Self management concepts
- . Job sharing and flexible work schedules
- . Greater technical literacy
- . More morning and evening educational seminars

- . Developing people to increase profits
- . To be compatible with the above items companies will be locating where creative people say they want to live
- . Education will be taking more educational activities to the potential student

"An information society's critical resource is not the machine but the individual; its investments is not in hardware but in education." (4)

OBJECTIVES

- . Establish a partnership council
- . Develop a communication network involving personnel in business, industry, government, education and chambers of commerce
- . Initiate a partnership organization between industry and education
- . Determine partnership needs through the use of a feasibility study
- . Implement a technology application center that will accommodate needs where institutional lack of capability exist
- . Follow up partnership organization implementation with data inventory that would determine whether a center for innovation and development is needed

PARTNERSHIP DEVELOPMENT PROCESS

"ONLY THE COMBINED EFFORTS OF HIGHER EDUCATION AND INDUSTRY WILL BE ADEQUATE TO MEET THE NEW DEMANDS OF AN INFORMATION SOCIETY." (5)

The intent of this proposed partnership effort is to identify the potential benefits, investigate opportunities that can evolve from such a relationship, explore the level of interest within the East Texas community to develop a partnership organization, and determine the population to be served by the partnership organization concept.

To initiate the information process concerning a partnership organization, the East Texas chambers of commerce offices, The East Texas Council of Government, educational institutions, industrial plants, legislators, congressmen, and business leaders will be contacted. Meetings with the various groups will focus on gathering information related to the "Proposed Technology Partnership Organization" graphic model provided at the end of this document. Pros and cons gleaned from the discussions will be used to adjust the proposed plan as needed.

Although The University of Texas at Tyler has assumed the responsibility of initiating the partnership concept, it is not the intent of The University of Texas at Tyler to impose any authority over any of the participating institutions, businesses, industries or agencies. However, this kind of activity does not happen without someone assuming the leadership responsibility.

The university will assume responsibility for appointing a technology partnership council and a communication network involved in sharing information and recommendations developed by that council. All participants have an opportunity to share input to the Technology Partnership Council.

When a technology application center is developed, The University of Texas at Tyler will coordinate responsibilities with that center. The Technology Partnership Council will make recommendations as to the activities the technology application center provides. Other center involvement by the technology partnership organization will be handled the same way.

A feasibility study is currently being conducted in the East Texas community to determine training/educational needs, partnership participants, existing needs, existing training/educational opportunities, the levels of educational needs, location of special training/educational expertise, existing training centers that could/would participate and amount of credit/non-credit activities anticipated. Data will be collected, organized and shared with the partnership participants.

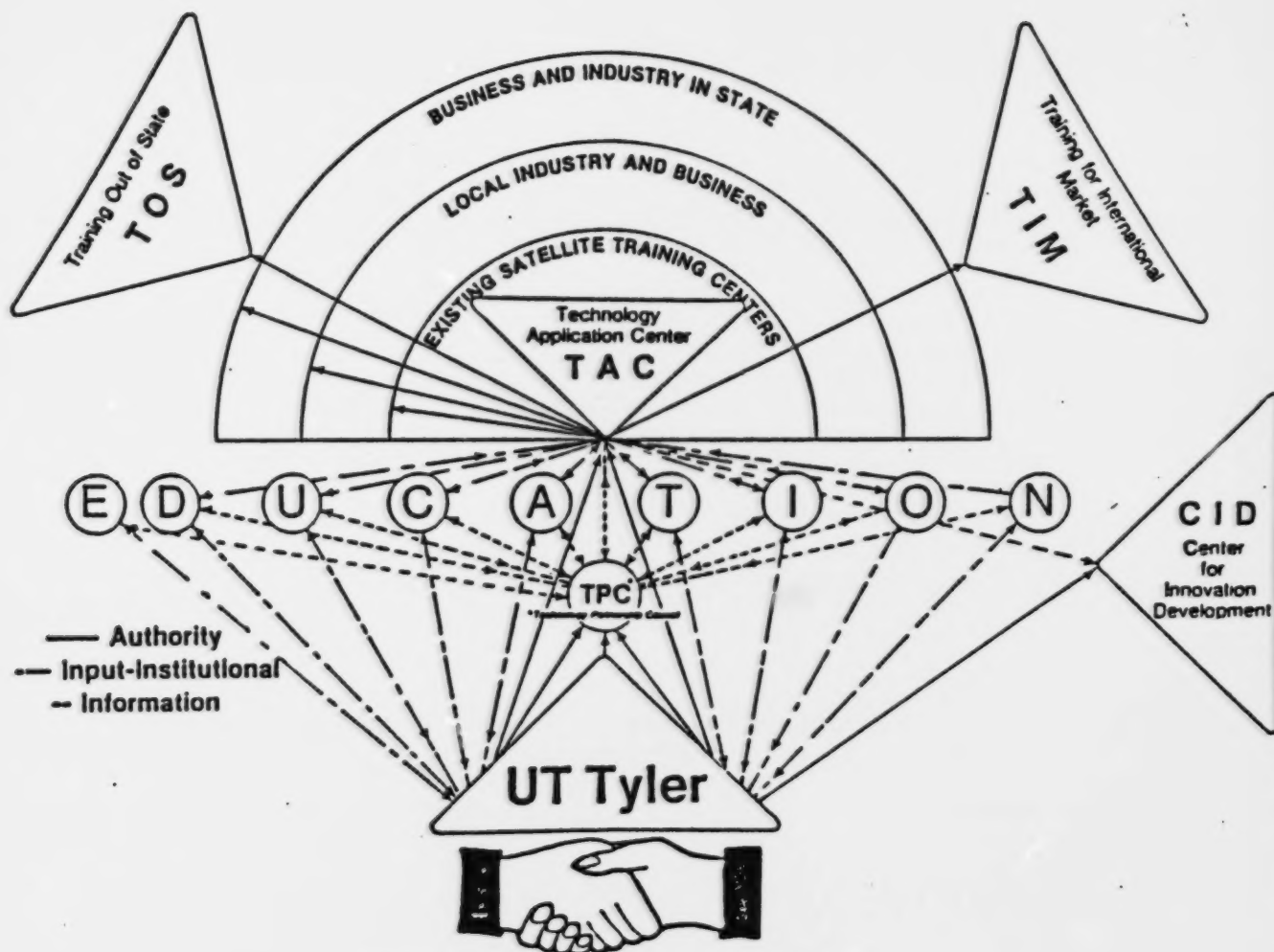
The intent of the partnership organization is to cut across the basic broad technology areas to serve as many industrial related needs as possible. Technologies that support communication, energy, construction, manufacturing, industrial distribution, transportation systems, and futuristic needs required by an information society, beginning with local concerns and expanding to global relationships, will determine the organizations activities.

NOTES

1. Jana B. Mathews and Rolf Norgaard, Managing the Partnership Between Higher Education and Industry, (Boulder, Colorado: NEHEMS, 1984), p.6.
2. Ibid. p. 204.
3. Ibid. p. 1.
4. Ibid. p. 8.
5. Ibid. p. 41.

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Technology Partnership Organization

The University of Texas at Tyler • Department of Technology

BRIEF SURVEY ANALYSIS

I have provided information involving local, state and national trends for industry and education that may be used in your analysis of the information gathered from East Texas industry. Also you may make some broad basic comparisons of data between the Technology Partnership study and the vocational study done by the Longview Chamber of Commerce.

As you study the responses please note the relationship that cuts across items #7 and #13. There are items in #21 that also reinforce 7 and 13. The support for the partnership approach was no surprise because of the 100% support indicated by the TPC in their initial meeting. However, there were some 250 participants involved in the study that had not had an opportunity to discuss the concept.

A variety of ways were revealed for the handling of training within industry. These ranged from no company training to the training function being handled by training directors, supervisors, industrial relations personnel, management, contracted, and corporate offices.

Training and educational methods used most were in house and seminar/conference. Other kinds of training such as continuing education junior colleges, universities, packaged systems, apprenticeship, and co-operative were used about equally. Limited use was made of corporate, vendors and television instruction.

As you would suspect about 86% of the number of employees were found in industry with 600 employees or less. Leaving about 14% to industry with 650 employees or above. This would also point to a very significant fact that the large number of industries with 600 or less employees also is the area where most help is needed. This is reinforced by the fact that only about 67% of all industries surveyed have a training budget.

Qualifications for employment were very broad and balanced out to a rather close percentage ranging from 43% to 61% which means that most employers have concerns about qualifications that fall into such areas as: physical, license or certification, high school diploma, special competencies, two years of college or four years of college.

A better perspective of qualifications is found in item seven. There are actually two ranges of expectations found in this question. Those areas that are individual characteristics related to communication skills, than those skills that are job related. Greater emphasis was placed on the personal characteristics.

As the respondents dealt with their problem areas again the individual problem related to lack of technical training, labor productivity, employees attitude, poor basic education, lack of safety skills and lack of motivated employees made up one high percentage problem area. Then the other high percentage problem area involved local, state and national taxes, labor cost, energy cost, transportation cost, and product marketing. There were several other concerns expressed with less frequency but nevertheless very important in terms of relationship between industry and education. They were lack of automation, poor leadership, global market competition, warehousing, and construction needs. Tied directly to the above concern would be industries concern about the lack of qualified workers.

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The source of employees ranged in order of local high schools, local colleges, local universities, out of East Texas sources and out of state sources. This is an important sequence as you look at industries expected increase of employees during the next few years in terms of new and changing technologies. Almost every respondent indicated that they expected the employee to be able to think, learn and to be creative. However, in item #21 they indicated most employees did not have this capability. This validates the old adage of "It is the 80% of personal skills and 20% of your specific skill (work) that keeps you on the job". This seemed to flow throughout the study which means greater emphasis in education should be directed to this concern.

The training time most used was a day and a half compressed training and after work hours. Almost all training was provided on "as needed basis".

There was little difference anticipated in the number of employees participating in training in the future, with 51% thinking there would be more and 45% thought no change in number. Related to the number participating in training were the reasons: 75% indicated for advancement, 67% indicated for job security and 42% said for financial reasons.

The question that dealt with financial assistance for employees indicated that 75% of industry responding did provide some kind of help if the education was job related. In a study that we made 4 years ago that involved industry in Texas and throughout the nation, involving industry with 250 or more employees the percent of assistance was 92%. This parallels the East Texas support when you look at the total number of industries involved with less than 250 employees.

The emphasis placed on the need for a Technology Application Center was much higher than expected in terms of our discussion at the TPC meeting in December. However this concept is growing rapidly in other areas of the state and nation, particularly as you look at the growing technology venture efforts.

Every participant in the study that had training facilities and staff indicated a willingness to share these. The real problem was reinforced by the fact that 33% did not have either staff or facilities.

Numerous areas of concern were identified in Item #21 regarding technical skills and technologies that were not being addressed at any level of education in the East Texas area. Two very important things were evident in this question. First, it was evident that Education was not marketing their expertise and Industry was not involved enough with educations to determine what was being done. Second, Industry was not sharing their need with Education and Education was not involved enough with Industry to know what needs and concerns exist.

This reveals the very reason as to why the partnership concept, when completely implemented will help both Industry and Education do a better job. This also reinforces our need for greater emphasis on a communication network.

Many other analyses may be made as the information from this study is compared with the attached information.

TECHNOLOGY PARTNERSHIP ORGANIZATION SURVEY
FALL 1985

INFORMATION: This survey has been designed to gather information that will assist the partnership organization in identifying those immediate needs that will support future relationships between industry and education.

Many questions allowed more than one response. Most respondents chose not to rank items in questions 7 and 13. Each item was tabulated and calculated into percentages to provide a visual indication of the relationship the responses had to the 89 questionnaires returned out of the 278 sent out. This return equaled 32% of the total mail out. Several areas within the questionnaire provided for or encouraged write-in information. That information has been recorded. An average of the total responses was computed from the number of returned questionnaires.

-
1. Do you think the partnership approach between industry and education will be beneficial to both partners? 98% Yes 2% No

 2. Who handles the training function with your company?

<u>10%</u> Industrial relations	<u>33%</u> None
<u>24%</u> Supervisors	<u>4%</u> Corporate office
<u>27%</u> Training director	<u>8%</u> Contracted
<u>10%</u> Management	

 3. Which of the following education/training methods are used by your company?

<u>90%</u> In house training
<u>53%</u> Contract training
<u>55%</u> Continuing education
<u>55%</u> Junior college training activities (credit/non-credit)
<u>55%</u> University training activities (credit/non-credit)
<u>42%</u> Packaged systems
<u>33%</u> Apprenticeship training
<u>47%</u> Cooperative training (OJT)
<u>82%</u> Seminars, conferences, workshops
<u>6%</u> Others (Specify) <u>Corporate, vendors, T.V. Inst.</u>

 4. How many employees does your company employ?

<u>2%</u> 10 - 25	<u>10%</u> 100 - 150	<u>8%</u> 650 - 1000
<u>12%</u> 25 - 50	<u>10%</u> 150 - 200	<u>4%</u> 1000 - 1500
<u>10%</u> 50 - 75	<u>16%</u> 200 - 400	<u>2%</u> 1500 - 2000
<u>8%</u> 75 - 100	<u>16%</u> 400 - 650	<u>4%</u> more than 2000

 5. Does your company have a training budget? 67% Yes 29% No 2% No response

 6. What special qualifications are required for entry level employment in your company?

<u>61%</u> Physical
<u>43%</u> License or certification
<u>59%</u> High School or GED Diploma
<u>61%</u> Special competencies
<u>45%</u> Two year college degree
<u>55%</u> Four year university degree
<u>6%</u> Other (Specify) <u>Job determines qualifications, experience, some degrees beyond U.S. basic education skill;</u>
<u>6%</u> No response

Partnership Survey
Page 2

7. What special skill do most of your employees need? (Using 1 to 10, prioritize your top 10 employee skill needs)
- 80% Employee communication skills
 - 88% Basic education skills
 - 67% Human relation skills
 - 61% Supervisory skills
 - 78% Trade skills (industrial)
 - 27% Managment systems
 - 33% Technology (hi-tech)
 - 45% Computer skills (automated application)
 - 73% Basic skills
 - 78% Safety knowledge and skills
 - 45% Production systems
 - 22% Transportation systems
 - 22% Construction systems
 - 12% Industrial distribution systems
 - 8% Energy systems
 - 10% Electrical systems
 - 20% Communication systems
 - 6% Other (Specify) Current job skills, problem solving skills, desire to do production work
8. What kind of training/education time period do you consider the most productive for your employee and your company?
- 20% One day "Crash" training program
 - 31% One and one-half day compressed training
 - 2% Two and one-half hours per night for a week
 - 2% Two and one-half hours per night for two nights a week
 - 59% Period of time after work for several weeks
 - 4% Others: Learn as you work
9. How often does your company provide training opportunities for your employees?
- | | |
|------------------------|----------------------------|
| <u>6%</u> Monthly | <u>4%</u> Annually |
| <u>4%</u> Quarterly | <u>86%</u> As needed |
| <u>0</u> Semi-annually | <u>6%</u> Others (Specify) |
10. Do you anticipate a significant change in number of employees participating in training in the future? 51% Yes 45% No 4% Do not know
11. What incentive do your employees have for participating in company sponsored training?
- 75% Considered in advancements
 - 42% Financial rewards
 - 67% Job security
 - 27% Just personal satisfaction
 - 6% Others (Specify) Required
12. Does your company provide financial assistance for employees to participate in formal education? (Higher education) 75% Yes 14% No
- 4% Limited assistance 8% No response

Partnership Survey

Page 3

13. What do you consider your company's major problem areas?
(Using 1 to 10, prioritize your top 10 needs)
- | | |
|------------|---|
| <u>80%</u> | Lack of technically trained employees |
| <u>61%</u> | Labor productivity |
| <u>65%</u> | Local, state, national tax structure |
| <u>47%</u> | Employee attitude |
| <u>80%</u> | Labor cost |
| <u>63%</u> | Cost of energy |
| <u>14%</u> | Access to raw materials |
| <u>61%</u> | Transportation cost |
| <u>42%</u> | Product marketing |
| <u>20%</u> | Global labor market competition |
| <u>65%</u> | Poor basic education |
| <u>10%</u> | Water supplies |
| <u>24%</u> | Poor leadership |
| <u>8%</u> | Adequate waste treatment facilities |
| <u>29%</u> | Lack of automation |
| <u>55%</u> | Lack of safety skills by employees |
| <u>10%</u> | Lack of recreational and cultural opportunities
for employees |
| <u>53%</u> | Motivated employees |
| <u>14%</u> | Warehousing |
| <u>10%</u> | Construction needs |
| <u>8%</u> | Others: Lack of investments in new products, cost of money, cash flow,
cost of insurance |
14. Do you think the supply of qualified workers is adequate? 47% Yes 53% No
15. What is the principle source of your employees?
- | | |
|------------|-----------------------------|
| <u>94%</u> | Local high school |
| <u>55%</u> | Local colleges |
| <u>47%</u> | Local universities |
| <u>24%</u> | Out of state sources |
| <u>33%</u> | Outside the East Texas area |
| <u>22%</u> | Other (Specify) |
16. Do you anticipate any change in number of employees in your company due to changing technology? 65% Yes 16% No Because of consolidations and automation
17. Do you expect your employees to be able to think, learn and create? 98% Yes 2% No
18. Will your company support the partnership concept development? 80% Yes 4% No 16% Maybe
19. Do you think a technology application center would be beneficial to industry and education in East Texas? 84% Yes 6% No 10% Maybe
20. If you have training staff and facilities would you be willing to share them with the partnership organization? 47% Yes 6% No 10% Probably
33% No training facilities or staff

Partnership Survey
Page 4

21. What technical skills or technologies do you know of that are not being addressed by any level of education in East Texas?

The following items were:

1. precision production machines
2. tool making
3. die making
4. industrial electricity
5. machine tool repair
6. metal stamping
7. polyethylene film extrusion
8. flexographic printing
- * 9. industrial application of computers
10. complete business schools
- * 11. industrial oriented business courses
- * 12. problem solving techniques
- * 13. attitude development
14. development of morals
15. industrial hygiene
- * 16. how to think - how to make judgements
- * 17. up to date curricula
- * 18. importance of quality
19. construction is limited
20. metallurgy
21. machinist
23. sewing skills
24. manufacturing automation (robotics)
25. mechanisms
- * 26. work ethics
- * 27. logical thinking
28. boiler repair
29. railroad car repair
30. railroad car painting
31. electricians
32. typing-computers-shorthand
33. more engineering

* Technology related skills

The Technology Partnership Organization shall be known as The Center for Technology Applications at the University of Texas at Tyler.

1: RATIONALE

The geographically isolated people of the East Texas region need and deserve the support and encouragement that an established Center for Technology Applications can provide. The "Center" as a cooperative venture between the industrial, government and educational units of the region have acknowledged the need and feel that the University is a natural and necessary focal point by which the Technology Partnership Council can match the regional resources with specifically identified educational and training needs. Implementation of the formal "Center" structure, properly equipped and staffed, will enable the council to expand its activities to more effectively meet the needs of business and industry in East Texas.

2: MISSION

The "Center" shall be organized and operated to further the interests and welfare of businesses, industries and educational institutions in the East Texas community. The "Center" will foster a closer working relationship between the governments and the local chambers of commerce. The "Center" will provide an environment that fosters relationships which renew the needed cooperative interdependence for the region. The Center for Technology Applications shall not operate for profit.

2.1: Objectives

The Center for Technology Applications, with the Technology Partnership Council will:

1. Define and maintain the mission and scope of The Center for Technology Applications in the East Texas region.
2. Cooperate and work with local, state and national agencies and organizations to encourage a closer relationship between business, industry, education, government and the local chambers of commerce through the promotion of economic development.
3. Identify, analyze and prioritize the needs of business, industry and education through the cooperative efforts of the Technology Partnership Council.
4. Develop, implement and maintain a communications network for business, industry and education in the East Texas region.
5. Provide research/development leadership and explore innovative techniques for developing the regions human resources.
6. Maintain and serve as a member organization to the Texas Innovation Information Network System (TIINS) and its advisory council.

2.1.1: Scope of Operation

- + Serve as an information clearinghouse.
- + Serve as the coordinator of resources within the University to provide assistance to business and industry that may improve their competitiveness in the world economy.

- + Provide a service that will tailor curricula to the specific needs of subject industries.
- + Provide an information network to improve education and training opportunities for business and industry.
- + Provide a business problem identification and resolution service.
- + Identify and target technologies particularly suited to East Texas.
- + Assist in the improvement and application of the innovative technologies.
- + Encourage the development of applicable industries in East Texas which employ the targeted technologies.

3: THE TECHNOLOGY PARTNERSHIP COUNCIL

The Technology Partnership Council shall consist of sixteen (16) members and the Director of the Center for Technology Applications. The council members are recommended by the council's executive committee and appointed by the President of the University of Texas at Tyler after confirmation vote of the council.

3.1: Council Responsibility

The Technology Partnership Council shall possess all the rights and privileges given to organizations by common law and shall be responsible for the impartial exercise of serving as the advisory group to the Center for Technology Applications and the University of Texas at Tyler for the purposes of the "Center" operations. The University of Texas at Tyler assumes full responsibility for the coordination of the Technology Partnership Council, providing staffing and assistance to the organization.

3.2: Membership

The sixteen (16) member council is composed of representatives from the following areas in the East Texas region:

- (2) Manufacturing
- (2) Communications
- (2) Energy/Transportation
- (1) Associated General Contractors
- (2) Business
- (2) Chambers at Large
- (1) East Texas Chamber
- (1) East Texas Council of Governments
- (1) Junior Colleges
- (1) University
- (1) Center Director

Each council member will assist the council and the "Center" in achieving its' role and objectives.

3.2.1: The Membership Term

Each member of the council shall serve a three (3) year term. One third of the membership will rotate off the council each year. Members may be renominated.

3.2.2: Council Chairs

The council chairperson is elected for a two (2) year term and is responsible for working with the "Center" director. The chair also serves as the executive committee chair in coordinating the affairs and activities of the council.

3.2.3: Alternates

Each member of the council is expected to select and request confirmation from the President of the University for an alternate who will serve as a voting member in their absence for regular scheduled meetings. Alternates do not apply to executive committee meetings or chair substitutes.

3.3: Executive Committee Membership

The Technology Partnership Council executive committee shall consist of the council chair, the vice chair, The director of the "Center" and the secretary of the council.

3.3.1: Executive Committee Powers

The executive committee shall be empowered to enact business decisions for the council between meeting dates at the discretion of the council chair and vice chair. Where question of impact and council involvement arise, a telephone vote to the council secretary by majority affirmation will confirm executive committee action.

3.3.2: Nominations

The executive committee will be responsible for nomination of members subject to council vote.

3.3.3: Responsibilities

The executive committee will coordinate the council responsibilities and activities.

3.4: Meetings

The Technology Partnership Council will have four (4) regular meetings a year. (1) First meeting in October for the first quarter of the fiscal year, (2) The second in January for the second quarter, (3) The third in April for the third quarter, and the fourth in July for the fourth quarter.

3.4.1: Executive Committee Meetings

The executive committee will meet four (4) times a year and at any time necessary to execute business pertaining to the Technology Partnership.

The 10 Megatrends that Will Change Your Life and Business

- * TREND NO. 1. Restructuring of America from an industrial society to a society based on information and knowledge. Inherent are changes as profound as those encountered when the country moved from an agricultural to an industrial society.
- * TREND NO. 2. The 1980's is a decade of unprecedented diversity among people, groups, institutions and geography, and an incredible market-segmented, decentralized society. Finding your market niche will be the business trick of the 1980's.
- * TREND NO. 3. Global economic interdependence of nations — a major trend in which developing countries supply the world's industrial products; developed nations emphasize high-tech and information products.
- * TREND NO. 4. Decentralization of all our institutions: business, governmental, social and political. For example, the computer is allowing big companies to disperse profit centers; government powers have already been moved from Washington to the states, local governments and companies are taking over welfare programs.
- * TREND NO. 5. Return of old-fashioned self-reliance. We have accelerated the moving away from dependence on institutions — including government, the medical establishment, corporations and the school system.
- * TREND NO. 6. The long-dominant business management pattern is undergoing a revolutionary upheaval. The old "top-down" corporate boss system is giving way to the innovative "bottom-up" system where employees have a say in how their companies are run.
- * TREND NO. 7. The traditional line-up of political power in America is undergoing such a profound change you won't recognize it in a few years. Voter interest will center almost exclusively on local and regional issues. National politics will be secondary.
- * TREND NO. 8. The population shift from North to South will continue and profoundly change the character of regional business and career opportunities. But not the entire South will benefit — the trends predict specific areas and cities of greatest growth and opportunity.
- * TREND NO. 9. The computer is a liberator rather than a tyrant and slave-driver as many had supposed. Some computers give individuals quick access to information formerly available only to companies. Also, with computers to keep track, companies can — and will — have different contracts with each of their employees.
- * TREND NO. 10. Demand for personal contacts and expanding human inter-relationships is going to skyrocket as people are exposed to more high technology — "high-tech/high-touch," a constant search for balance between technology and human contact.....Good Luck, John Naisbitt.

Technology Partnership Hotline

Introducing . . . an all-new communications network for the East Texas Technology Partnership Organization. Responding to a need for a communication exchange to help improve education and training programs for business and industry in East Texas, the Technology Partnership Council now offers immediate access to an information exchange via an Automatic Telephone Response System. The plan to facilitate immediate communication among industry, business, chambers of commerce, and education.

Two-Way Communications Network

To Receive . . . latest information on seminars, training activities, technological developments.

To Transmit . . . messages, announcements, requests for information or training programs.

A New Resource for East Texas

What does business and industry need? How can education respond? This Automatic Telephone Response System provides a point of contact for some 300 participants among education, business & industry, Chambers of Commerce, and the East Texas Council of Governments.

To discover the latest developments in technology in East Texas . . . to share timely data with other members . . . or to request training programs . . . use the Technology Partnership Hotline.

This Automatic Telephone Answering System is stationed at The University of Texas at Tyler where tapes are monitored daily. Urgent requests or short-term notices receive immediate attention. Plus, all information submitted to the Hotline is recorded, transcribed and circulated weekly to members of the Technology Partnership Organization.

Dial: 214-566-4323